Claims

1. An n-alkyl 3-amino-3-arylpropionate represented by the formula (I):

$$R^1$$
 R^1 (I)

wherein Ar¹ represents an aryl group which may have a substituent(s), provided that a phenyl group and 4-methoxyphenyl group are excluded, R¹ represents an n-propyl group or an n-butyl group.

2. An (R or S)-n-alkyl 3-amino-3-arylpropionate represented by the formula (I-a):

$$Ar^{1}$$
 * O R^{1} $(I-a)$

wherein Ar^1 and R^1 have the same meanings as defined in Claim 1, and * represents an asymmetric carbon.

3. A process for preparing an n-alkyl 3-amino-3-aryl-propionate represented by the formula (IV):

$$Ar$$
 NH_2
 O
 R^1
 (IV)

wherein R^1 represents an n-propyl group or an n-butyl group, and Ar represents an aryl group which may have a substituent(s), provided that a phenyl gruop is excluded,

which comprises

(A) a first step of reacting an arylaldehyde represented by the formula (II):

$$Ar$$
 H (II)

wherein Ar has the same meaning as defined above, and malonic acid and ammonium acetate in an organic solvent to make a 3-amino-3-arylpropionic acid represented by the

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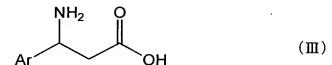
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formula (III):

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wherein Ar has the same meaning as defined above,

- (B) then, a second step fo reacting the resulting compound with a 3-amino-3-arylpropionic acid and n-propyl alcohol or n-butyl alcohol in the presence of an acid catalyst.
- 4. The process for preparing an n-alkyl 3-amino-3-aryl-propionate according to Claim 3, wherein the organic solvent is an alcohol solvent.
- 10 5. The process for preparing an n-alkyl 3-amino-3-aryl-propionate according to Claim 4, wherein the alcohol solvent is ethanol or isopropyl alcohol.
- 6. A process for preparing an optically active (S or R)-3-amino-3-arylpropionic acid represented by the formula (III-a):

$$NH_2$$
 O (III-a)

wherein Ar represents an aryl group which may have a substituent(s), and * represents an asymmetric carbon,

and an optically active (R or S)-n-alkyl 3-amino-3-aryl-propionate represented by the formula (IV-a):

$$R^1$$
 (IV-a)

wherein Ar and * have the same meanings as defined above, and R^1 represents an n-propyl group or an n-butyl group, provided that it has a reverse absolute configuration to that of the compound of the formula (III-a),

which comprises subjecting either one of enantiomers of n-alkyl 3-amino-3-arylpropionate which is racemic mixtures and represented by the formula (IV):

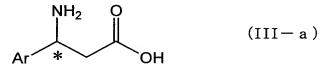
$$R^1$$
 (V)

wherein Ar and R^1 have the same meanings as defined above,

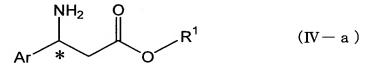
to selectively hydrolysis reaction in the presence of a hydrolase in a mixed solvent of an organic solvent and a buffer.

- 7. The process according to Claim 6, wherein the hydrolase is protease, esterase or lipase.
- 8. The process according to Claim 6 or 7, wherein the hydrolase is lipase originated from *Burkholderia cepacia* (*Pseudomonas cepacia*).
 - 9. The process according to Claim 6, wherein the organic solvent is an aliphatic hydrocarbon, an aromatic hydrocarbon or an ether, or a mixed solvent of the above.
- 15 10. The process according to Claim 6, wherein the organic solvent is cyclohexane, t-butyl methyl ether or toluene.
 - 11. The process according to any one of Claims 6 to 10, wherein the buffer is at least one selected from the group consisting of an aqueous sodium phosphate solution, an
- 20 aqueous potassium phosphate solution, an aqueous sodium acetate solution, an aqueous sodium citrate solution and an aqueous ammonium acetate solution.
 - 12. The process according to any one of Claims 6 to 10, wherein the buffer is at least one selected from the group $\frac{1}{2}$
- consisting of an aqueous sodium phosphate solution and an aqueous potassium phosphate solution.
 - 13. The process according to Claim 11 or 12, wherein a concentration of the buffer is 0.05 to 0.5 mol/L.
- 14. The process according to any one of Claims 6 to 13, 30 wherein the hydrolysis reaction is carried out at 10 to 50°C.
 - 15. The process according to any one of Claims 6 to 13, wherein the hydrolysis reaction is carried out at 30 to 45°C .

16. The process according to Claim 6, wherein each of the optically active (S or R)-3-amino-3-arylpropionic acid represented by the formula (III-a):



wherein Ar has the same meaning as defined above, and * represents an asymmetric carbon, and the optically active (R or S)-n-alkyl 3-amino-3-arylpropionate represented by the formula (IV-a):



wherein Ar and R¹ have the same meanings as defined above, * represents an asymmetric carbon, provided that it has a reverse absolute configuration to the compound of the formula (III-a),

formed by the hydrolysis reaction is isolated from the mixture thereof.

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17. The process according to Claim 6 or 16, wherein Ar is a phenyl group, 2-tolyl group, 3-tolyl group, 4-tolyl group, 2,3-xylyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, 2,3-dichlorophenyl group, 2,4-dichlorophenyl group, 3,4-dichlorophenyl group, 3,5-dichlorophenyl group, 2-bromophenyl group, 3-bromophenyl group, 4-bromophenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 3,4-difluorophenyl group, 2-iodophenyl group, 3-iodophenyl group, 4-iodophenyl group, 2-methoxyphenyl group, 3-methoxyphenyl group, 3,4-dimethoxyphenyl group, 3,5-dimethoxyphenyl group, 3,4-dimethoxyphenyl group, 3,5-dimethoxyphenyl group or 3,4-methylenedioxyphenyl group.